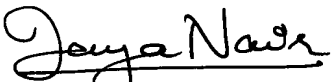
REMARKS/ARGUMENTS

Applicants thank the Examiner for his careful review of this application. An amendment was filed on December 13, 2004. However, the amendment document filed on December 13, 2004 was considered to be non-compliant because claims 1-51 were missing from the listing of claims. Applicants hereby submit a new Listing of Claims indicating that Claims 1-51 were cancelled. Applicants respectfully request reconsideration of pending claims 52 through 92 in view of this amendment and the amendment filed on December 13, 2004. A copy of the Amendment, and the one-month extension fee, as filed on December 13, 2004 and the certificate of mailing, are enclosed for the Examiner's reference.

Conclusion

If the Examiner has any questions concerning the present Amendment, the Examiner is requested to contact the undersigned at (408) 774-6926. If any additional fees are due in connection with filing this Amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. SUNMP581). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
MARTINE PENILLA GENCARELLA, L.L.P.



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PATENT POSTCARD – Customer No. 32291

Docket No. SUNMP581 Appln. No. 09/612,141 Date: December 13, 2004

By: JN:slc Filing Date: July 7, 2000 Express Mail No.:

Inventor(s): Alan T. RUBERG et al.

Title: REMOTE DEVICE MANAGEMENT IN GROUPED SERVER ENVIRONMENT

THE FOLLOWING HAS BEEN RECEIVED IN THE U.S. PATENT & TRADEMARK OFFICE ON THE DATE STAMPED BELOW:

- Amendment Transmittal (1 page, in duplicate)
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PATENT

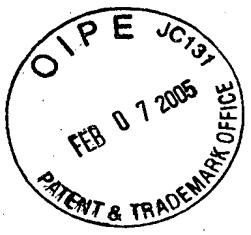
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:
Alan T. RUBERG et al.

Application No.: 09/612,141

Filed: July 7, 2000

For: REMOTE DEVICE MANAGEMENT IN GROUPED SERVER ENVIRONMENT



Attorney Docket No.: SUNMP581

Examiner: Lezak, Arrienne M.

Group Art Unit: 2143

Date: December 13, 2004

☑ **Duplicate for fee processing**

Mail Stop Amendment
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail to: Commissioner for Patents, Alexandria, VA 22313-1450 on December 13, 2004.

Signed: Jaya Nair
Jaya Nair

Sir:

Transmitted herewith is an Amendment in the above-identified application.

The fee has been calculated as shown below.

	Claims Remaining After Amendment		Highest Previously Paid For	Present Extra	SMALL ENTITY RATE FEE	OR	LARGE ENTITY RATE FEE
TOTAL CLAIMS	41	-	51	0	X25 = $	OR	X50 = $0
INDEP CLAIMS	02	-	08	0	X100 = $	OR	X200 = $0
[ ] Multiple Dependent Claim Present and Fee Not Previously Paid					$125		$250
				TOTAL	$_____		$0

☒ Applicant(s) hereby petition for a 1-month extension of time to respond to the outstanding Office Action.

☒ Applicant(s) believe that no (additional) Extension of Time is required; however, if it is determined that such an extension is required, Applicant(s) hereby petition that such an extension be granted and authorize the Commissioner to charge the required fees for an Extension of Time under 37 CFR 1.136 to Deposit Account No. 50-0805.

☒ Enclosed is our Check No. 13056 in the amount of $120.00 to cover the additional claim fee and/or extension of time fees.

☒ If the required fees are missing or any additional fees are required to facilitate filing the enclosed response, please charge such fees or credit any overpayment to Deposit Account No. 50-0805 (Order No. SUNMP581). A copy of this sheet is enclosed.

Respectfully submitted,
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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:	
Alan T. Ruberg et al.	Group Art Unit: 2143
Application No.: 09/612,141	Examiner: Lezak, Arrienne M
Filed: July 7, 2000	Attorney Docket No.: SUNMP581
Title: REMOTE DEVICE MANAGEMENT IN GROUPED SERVER ENVIRONMENT	Date: December 13, 2004

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on **December 13, 2004**.

Signed: Jaya Nair

Commissioner for Patents
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AMENDMENT

Dear Sir:

Applicants submit this paper in response to the Office Action mailed August 13, 2004. A response to the Office Action was due on November 15, 2004. Accordingly, Applicants are concurrently submitting a request for a one-month extension of the period for response. Please amend this application as follows:

Amendments to the claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 11 of this paper.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

What is claimed is:

CLAIMS:

52. (Previously amended) A method for device management in a grouped server system, comprising:

creating a request to control a device on a desktop unit from a device service on at least one of a first server and a second server;

transferring said request from a first device manager in said first server to a second device manager in said second sever, said first device manager being coupled to said device service;

allocating said device to said device service via said second device manager; and

informing said first device manager of said allocation via said second device manager;

wherein said device service controls said device by implementing a complete device driver for said device.

53. (Previously presented) The method of Claim 52, wherein said request comprises desired capabilities for said device.

54. (Previously amended) The method of Claim 52, wherein said first server and said second server operate in a group, further comprising:

establishing a first communication path between said first device manager and said second device manager; and

establishing a second communication path between said device on said desktop unit and said second device manager.

55. (Previously presented) The method of Claim 54, wherein said establishing said first communication path comprises receiving a group list, said group list comprising grouping information of device managers in said group.

56. (Previously presented) The method of Claim 54, wherein said establishing said second communication path comprises said desktop unit arbitrarily connecting to said second device manager.

57. (Previously presented) The method of Claim 52, further comprising:

creating a first device list via said first device manager; and

creating a second device list via said second device manager;

wherein said first device list is segregated from said second device list.

58. (Previously presented) The method of Claim 57, wherein said first device list comprises device records for device managed by said first device manager.

59. (Previously presented) The method of Claim 57, wherein said first device list comprises device records for devices managed by both of said first device manager and said second device manager and wherein said second device list comprises device records for devices managed by said second device manager.

60. (Previously presented) The method of Claim 57, wherein said first device list comprises device records for devices managed by said first device manager and peer device managers in said grouped server system.

61. (Previously presented) The method of Claim 60, wherein said grouped sever system comprises said first device manager, said second device manager, said peer device managers, said desktop unit, and a plurality of other desktop units all coupled to each other via an interconnect, further comprising:

identifying which device manager manages which device.

62. (Previously amended) The method of any Claim 52, further comprising:

creating a finder in accordance with said request via said first device manager; wherein said finder comprises a pattern of registered devices to be controlled by said device service.

63. (Previously amended) The method of Claim 62, further comprising:

searching a first device list coupled to said first device manager for a device matching said registered devices of said finder.

64. (Previously presented) The method of Claim 63, further comprising:

storing said finder in said first server.

65. (Currently amended) The method of Claim 64, wherein said transferring said request to said second device manager comprises said second device manager creating a second finder in accordance with said request.

66. (Previously amended) The method of Claim 65, further comprising:

searching a second device list coupled to said second device manager for a device matching said second finder.

67. (Previously amended) The method of Claim 65, further comprising:

storing said second finder locally in said second server.

68. (Previously presented) The method of Claim 52, further comprising:

determining which device manager manages said device; and

informing said device service of said managing device manager.

69. (Previously amended) The method of Claim 52, wherein said desktop unit does not have built-in knowledge to directly control said device and wherein a user of said desktop unit needs said device service to operate said device on said desktop unit.

70. (Previously amended) The method of Claim 52, further comprising:

creating a first device list in said first server via said first device manager; and

creating a second device list in said second server via said second device manager;

time stamping a first time-stamp on said first device list and a second time-stamp on said second device list said transferring said request to said second device manager comprises said second device manager replacing said second device list in said second server by said first device list in said first server if said second time-stamp is earlier than said first time-stamp.

71. (Previously amended) The method of Claim 70, wherein said time stamping occurs when said first and second time lists are created.

72. (Previously presented) The method of Claim 70, further comprising:

maintaining a universal clock among all servers in said grouped server system; wherein said time stamping is based on said universal clock.

73. (Previously presented) The method of Claim 52, further comprising:

determining which device manager manages said device; and

forwarding said request to said determined device manager that manages said device.

74. (Previously presented) The method of Claim 73, wherein said determined device manager that manages said device is located in one server and said service is located in another server.

75. (Previously presented) The method of Claim 73, wherein said first server comprises a first device list, said first device list comprising a device record for said device, further comprising:

transferring said device record to said second device manager in said second server; and

updating a second device list to include said device record via said second device manager.

76. (Previously presented) The method of Claim 75, further comprising:

matching said request with said device record in said second device list;

wherein said determining which device manager manages said device is determined from said second device list.

77. (Previously presented) The method of Claim 52, further comprising:

generated a device list for said first manager and said second device manager;

wherein said device list comprises devices managed by a device manager; and

wherein said device list further comprises devices managed by peer device managers, further comprising:

transferring device data between said peer device managers.

78. (Previously presented) The method of Claim 52, further comprising:

maintaining a persistent connection between said desktop unit and a single device manager.

79. (Previously presented) The method of Claim 78, further comprising:

establishing a first communication path between said desktop unit and said first device manager; and

terminating said first communication path; and

establishing a second communication path between said desktop unit and said second device manager when an event occurs.

80. (Previously presented) The method of Claim 79, wherein said event comprises resetting said desktop unit.

81. (Previously presented) The method of Claim 79, wherein said event comprises failure of said first device manager.

82. (Previously amended) A grouped server system, comprising:

an interconnect;

a plurality of servers, each of said servers having a device manager;

a plurality of device services for implementing device drivers located on said servers;

a plurality of desktop units coupled to said servers via said interconnect, each desktop unit being coupled to one of said device managers; and

a plurality of peripheral devices located on said desktop units;

wherein said device managers on said servers broker controls of said peripheral devices on said desktop units by said device services on said servers; and

wherein said device managers are operating in a group.

83. (Previously amended) The grouped server system of Claim 82, wherein each of said device managers is coupled to a device list and wherein said device lists are segregated from each.

84. (Previously presented) The grouped server system of Claim 83, wherein each of said device lists comprises data of peripheral devices managed by said device manager coupled to said device list.

85. (Previously presented) The grouped server system of Claim 84, wherein said device list further comprises data of devices managed by peer device managers coupled to said device list.

86. (Previously amended) The grouped server system of Claim 83, further comprising a universal time clock for time stamping said device list as it is generated to ensure that said device list coupled to each of said device managers is not outdated.

87. (Previously presented) The grouped server system of Claim 82, wherein each of said device managers can be used to broker a peripheral device managed by a first device manager to a device service coupled to a peer device manager.

88. (Previously amended) The grouped server system Claim 82, further comprising a finder comprising scoping rules for a type of said peripheral devices from at least one of said device services.

89. (Previously presented) The grouped server system Claim 82, wherein at least one of said device services is coupled to at least one of said device managers, said at least one of said device services communicating a first device report and a first allocation request with said at least one of said device managers.

90. (Previously amended) The grouped server system of Claim 89, wherein said at least one of said device services is coupled to at least one of said plurality of desktop units, said at least one of said device services communicating device data of at least one said

plurality of peripheral devices with said at least one of said plurality of desktop units via said at least one of said device managers.

91. (Previously presented) The grouped server system of Claim 90, wherein said at least one of the said device managers is coupled to said at least one of said plurality of desktop units, said at least one of said device managers communicating a second device report and a second allocation request with said at least one of said plurality of desktop units.

92. (Previously amended) The grouped server system Claim 82, wherein each of said plurality of device serves can implement a complete device driver, wherein each of said device managers can provide said device driver, wherein said device driver remotely controls at least one of said peripheral devices managed by other device managers in said grouped server system, wherein each of said device managers can maintain a first database comprising device data and a second database comprising scoping rules for said at least one peripheral device from at least one of said device services, wherein each of said device managers can search for a match between said first database and said second database, and wherein each of said device managers can forward a request to other device managers in said grouped server system if no match is found.

REMARKS/ARGUMENTS

Applicants thank the Examiner for his careful review of this application. Claims 52-92 remain pending. Applicants respectfully request reconsideration of the application in view of the following remarks submitted in support thereof.

Rejections under 35 U.S.C. §103(a):

The Examiner rejected claims 52-93 under 35 U.S.C. §103(a), as being unpatentable over US Patent 6,628,15B to Lawrence et al. (Lawrence) in view of US Patent 6,389,589B1 to Mishra et al. (Mishra). Applicants respectfully traverse each and every rejection for at least the following reasons.

Citing Lawrence, the Examiner asserts that Lawrence discloses a system and method for device management in a grouped server system comprising a plurality of servers operating in a group and a plurality of set top units. In fact, there is nothing in Lawrence that suggests a grouped server system. Lawrence teaches attaching a printer locally to a set top box. What Lawrence is trying to accomplish is to attach a printer locally to the set top box without having to pre-install printer drivers for several printers.

According to Lawrence, the printer drivers for the attached printer are obtained from the cable head end on the digital cable network in response to a request from the set top box (Column 2, lines 41-45). The cable head end collects value added services to be distributed over the digital cable network. The cable head end also implements the network control systems, which handle the distribution and control of the aforementioned services. Moreover, the cable head end on a typical digital cable network may provide services to one-half to one million homes by distribution over the digital cable network (Column 1, lines 32-40). The cable head end in Lawrence collects the information, i.e. different printer drivers,

and provides it to the set top box so that memory space in the set top box can be freed. Lawrence describes the cable head end as the server and the set top box as the client (Column 6, lines 51-53). If the Examiner's assertion was correct, then at the time when the cable head end receives a request for a printer driver, the cable head end should be able to pass the request to another cable head end if the requested cable head does not have the requested printer driver. The cable head end serves as an interface between the service providers and the rest of the broadband network.

In contrast, the claimed invention defines a method for device management in a grouped server system where device operations remain uninterrupted when a server fails. In the present invention, a plurality of servers act as a group. Specifically, the present invention provides a device manager on a server to interface a device service on the server with a peripheral device connected to a desktop unit to control and use the peripheral device. To make the control and use of the peripheral device without any interruption due to server failure, the present invention provides a plurality of device managers located in a plurality of servers that a act as a group. For example, a request for control of the peripheral device can be presented to a first device manager in a first server. The device service can also be located on the first server. In the event of a failure of the first device manager or an inability of the first device manager to interface the device service with the proper peripheral device, the control request is transferred to a second device manager in a second server. The second device manager then allocates the proper peripheral device to be controlled by the requesting device service. Thus, the present invention provides a plurality of device managers for interfacing or brokering device services on the servers with peripheral devices on the desktop units in a grouped server environment without any single point of failure.

Moreover, the Examiner compared the set top box in Lawrence to the thin client in the claimed invention. This comparison is misplaced because the medium for communication between the client (set top box) and the server (cable head end) is limited to a digital cable network because set top boxes are used for connecting a television to the digital cable network. The set top boxes are incapable of being connected to the servers on the web without the intermediary i.e. the cable head end. Each set top box is only connected to one cable head end i.e. the server (see FIG.1). Therefore, the cable head ends in Lawrence is not working in group like the servers of the claimed invention. Therefore, if one of the cable head end fails, the set top box will not be able to get printer drivers through other cable head ends.

The next reference Mishra teaches a computer network with centralized management and deployment of applications. The computer network in Mishra includes centralized class stores such that applications and components are made centrally available so that updates to components or applications are performed once in a centralized location, whereby users may automatically obtain new versions of applications as they become available. Moreover, Mishra does not mention about a number of servers functioning as a group in order to provide uninterrupted device operation when a server fails. In Mishra, if the server which contains the centralized class store fails, then the users do not have any other recourse. As a result, the combination of Lawrence and Mishra would not have taught device management in a grouped server system wherein the request gets transferred from one server to the other to provide uninterrupted device operations.

Therefore, it is respectfully submitted that independent claims 52 and 82 are patentable under 35 U.S.C. §103(a) over any combination of the cited prior art. In a like manner, dependent claims 53, 68, 69, 73, 74 82, 87, 92, and 93, which depend directly or

indirectly from independent claims 52 and 82, are patentable over Lawrence alone or in combination with Mishra. Similarly, claims 54-56, 78-81, and 89-91 are patentable over Lawrence in view of Mishra at least for the same reasons stated above. Likewise, claims 57-61 and 83-85, which depend directly or indirectly from independent claims 52 and 82, are patentable.

Conclusion

In view of the foregoing, the Applicants respectfully submit that all the pending claims 52-92 are in condition for allowance. Accordingly, a Notice of Allowance is respectfully requested. If the Examiner has any questions concerning the present Amendment, the Examiner is requested to contact the undersigned at (408) 774-6926. If any additional fees are due in connection with filing this Amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. SUNMP581). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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